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Method for manufacturing anatase titanium dioxide sol for ambient temperature coating and apparatus therefor

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Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2001096668	A	20011108	KR 200138061	A	20010629	200230 B
KR 378279	B	20030329	KR 200138061	A	20010629	200353

Priority Applications (No Type Date): KR 200138061 A 20010629

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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KR 2001096668	A	1		C01G-023/053	
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KR 378279	B			C01G-023/053	Previous Publ. patent KR 2001096668
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Abstract (Basic): KR 2001096668 A

NOVELTY - An anatase titanium dioxide sol for ambient temperature coating that is capable of decomposing nonbiodegradable chemical compounds by photocatalytic reaction is provided for wastewater treatment decompose nonbiodegradable chemical compounds by photocatalytic reaction.

DETAILED DESCRIPTION - The manufacture method of the anatase titanium dioxide sol includes the steps of (i) mixing titanium alkoxide with water in a mole ratio 1:20; (ii) adding at least 0.5 mole ratio strong acid, based on 1 mole ratio of titanium alkoxide; (iii) agitating this solution for 4hrs at over 100deg.C; (iv) adjusting hydrogen-ion concentration of the solution to pH 7 by adding NH₄OH; (v) washing three times titanium dioxide cake with water; (vi) dispersing titanium dioxide cake in alcohol. In addition, one or more elements selected from Zr, Al and Si is added to the obtained anatase titanium dioxide sol in a mole ratio of at 0.01 or higher, based on the mole ratio of titanium alkoxide.

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Title Terms: METHOD; MANUFACTURE; ANATASE; TITANIUM; SOL; AMBIENT;
TEMPERATURE; COATING; APPARATUS

Derwent Class: D15; E32

International Patent Class (Main): C01G-023/053

File Segment: CPI

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